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PATENT APPLICATION

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

APPLICANT: Schaefer

EXAMINER: Griffin, W.

SERIAL NO.: 09/669,400

GROUP: 1764

FILED: September 22, 2000

CASE NO.: 52647-1

ENTITLED: Process for Treating Waste Oil

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Frederick Schaefer  
1012 Zamora Circle  
Colorado Springs, CO 80910

May 12, 2005

**PETITION TO REVIVE AN UNINTENTIONALLY ABANDONED APPLICATION**  
**UNDER 1.137 (b)**

Honorable Commissioner of  
Patents and Trademarks  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

The applicants respectfully petition under 37 CFR 1.137 (b) that the application captioned above be revived as a pending application of one unintentionally abandoned.

(1) The required reply is attached. The Response required to the Office Action of April April 2, 2004 is attached and now in the format required by the Examiner and the PTO at that time.

(2) A petition fee of \$750.00 is enclosed.

05/18/2005 MAHME1 00000004 09669400

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(3) The entire delay in filing the required reply to the Advisory Action dated **March 4, 2005** until the filing of this petition was unintentional. The applicant never received the Advisory Action or Notice of Abandonment in the mail, since it was not sent to the proper correspondence address. The petition was denied and this petition under 1.137(b) is now being filed.

(4) The application was filed after June 8, 1995 and therefor no terminal disclaimer is required.

The applicant respectfully requests that the petition be granted.

Respectfully submitted,

By Frederick A Schaefer  
Frederick Schaefer

I hereby certify that an petition is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner of Patents and Trademarks, P.O. Box 1450, Alexandria, VA 22313-1450, on:

5/12/05  
Date

Frederick Schaefer  
Signature

**Correspondence Address**

Frederick Schaefer  
1012 Zamora Circle  
Colorado Springs, CO 80910



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Frederick Schaefer  
1012 Zamora Circle  
Colorado Springs, CO 80910

May 12, 2005

**RESPONSE UNDER 37 CFR 1.111**

Honorable Commissioner of  
Patents and Trademarks  
Washington, D.C. 20231

Sir:

Responsive to the Office Action dated April 2, 2004, the Advisory Action of March 4, 2005 the applicant hereby responds as follows:

In the Specification Please add the following paragraph after the title:

**Related Applications**

The present invention claims priority on provisional patent applications, Serial No. 60/171,915, filed on December 21, 1999, and Serial No. 60/098,630, filed on April 20, 2000.

In the claims

1-12(Canceled).

13(Previously Amended). An apparatus for purifying waste oil, comprising:

- (a) a preprocessing analyzer section connected to an input stream for waste oil and an output;
- (b) a preprocessing switch controlled by the analyzer section having an input connected to an analyzer section output and an output, the preprocessing switch having a first output and a second output;
- (c) a heating section connected to the first output of the preprocessing switch and a microwave heating section connected to the second output; and
- (d) a demulsification section connected a heating output and having an output lower for settling.

14(Previously Amended). The apparatus for purifying waste oil of claim 13 wherein the apparatus further comprises a preheating section connected before of the preprocessing switch.

15(Original). The apparatus of claim 14, wherein said waveguide includes a straight member between a first end and a second end, the first end is a curved member having a 45° "H" -plane bend of miter construction.

16(Original). The apparatus of claim 8, wherein the microwave heating section includes a sensor that determines a reflected energy.

17(Previously Amended). The apparatus for purifying waste oil of claim 15 wherein the waveguide includes a straight member between a first end and a second end, the first end is a curved member having a 45° "H" plane bend of miter construction.

18(Original). The apparatus for purifying waste oil of claim 13, wherein the apparatus further comprises a post processing analyzer section connected to a

demulsifier output, and a post-processing analyzer section output of the post-processing analyzer section.

19(Original). An apparatus for purifying waste oil, comprising:

- (a) a pump connected to the supply of waste oil creating a waste oil stream;
- (b) a microwave heating section heating the waste oil stream to form a heated oil stream; and
- (c) a demulsification section having a super critical CO<sub>2</sub> inlet and a settling outlet lower than the inlet and connected to microwave heating section

20(Previously Presented). The apparatus for purifying waste oil of claim 19 wherein the apparatus further comprises an analyzer section after the pump that determines a percentage of water in the waste oil stream feed.

21(Cancelled).

22(Currently Amended). The apparatus for purifying waste oil of claim ~~24~~ 20 wherein the microwave heating section further comprises a sensor connected to the microwave generator for determining an amount of reflected energy.

23(Canceled).

### Remarks

Claims 13-20 & 22 are at issue. Claim 22 stands rejected under 35 USC 112 second paragraph. Claims 13-20 are allowed.

A new declaration was previously submitted that corrects the error pointed out by the Examiner.

The specification has been amended to show that the application claims priority based on two provisional patent applications.

Claim 22 has been amended to overcome the minor oversight.

**A fee (\$750.00) for a petition to revive the patent application is enclosed.**

With respect to the advisory action of November 3, 2004 "continuation of 10" 37 CFR 1.97 (d) & (e): Mr. Schaefer entered into cooperative research agreement with Duquesne University to reduce the invention to practice. Mr. Al-Khalidi and Dr. Kingston were researchers for Duquesne University. Duquesne University filed a patent application related to the cooperative research agreement, which was published as PCT/US00/41930 (WO 01/37961 A2). Mr. Schaefer contributed the idea of the sequential processing step using microwave energy then super critical fluid extraction which is encompassed in the claims of PCT/US00/41930 (WO 01/37961 A2). However, Mr. Schaefer was not named as an inventor on the PCT/US00/41930 (WO 01/37961 A2) patent application. Subsequently, Mr. Schaefer filed the present patent application. Unfortunately, Mr. Schaefer had to postpone pursuing the technology and did not have the funds or time to submit the information disclosure of the PCT/US00/41930 (WO 01/37961 A2) patent application or pursue the present application. As a result, the IDS of PCT/US00/41930 (WO 01/37961 A2) patent application was not filed until Mr. Schaefer's last correspondence. However, since Mr. Schaefer should have been a named inventor on PCT/US00/41930 (WO 01/37961 A2), he does not believe that PCT/US00/41930 (WO 01/37961 A2) is prior art under the law.

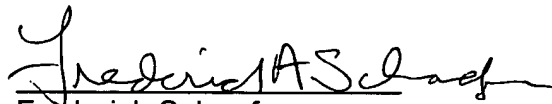
The application has been placed in condition for allowance, prompt reconsideration and allowance are respectfully requested.

Correspondence Address

Frederick Schaefer  
1012 Zamora Circle  
Colorado Springs, CO 80910

Respectfully submitted,

By




Frederick Schaefer

Inventor

Phone: (719) 360-4600

I hereby certify that a Response is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231, on:

5/12/05  
Date

  
Signature